

WHAT IS CLAIMED IS:

1. A method for sealing endoleaks in a patient arising from endovascular repair of abdominal aortic aneurysms which method comprises:

identifying an abdominal aortic aneurysm in a patient;

5 endovascularly repairing said aneurysm by catheter delivery of an endovascular prosthesis to the site of said aneurysm thereby inhibiting blood flow into the aneurysm;

identifying one or more endoleaks in a patient; and

10 delivering through a microcatheter to the site or sites of endoleaks in said patient a sufficient amount of a fluid composition comprising a biocompatible solvent and a biocompatible polymer under conditions wherein the fluid composition forms a coherent adhesive mass *in situ* thereby sealing the endoleaks.

2. The method according to Claim 1 wherein said biocompatible
15 polymer is selected from the group consisting of cellulose acetate polymers, ethylene vinyl alcohol copolymers and polyacrylates.

3. The method according to Claim 2 wherein said biocompatible polymer is a cellulose acetate polymer or an ethylene vinyl alcohol copolymer.

4. The method according to Claim 1 wherein said biocompatible
20 solvent is selected from the group consisting of dimethylsulfoxide, ethanol, ethyl lactate, and acetone.

5. The method according to Claim 4 wherein said biocompatible solvent is dimethylsulfoxide.

6. The method according to Claim 1 wherein the composition further comprises a contrast agent.

7. The method according to Claim 6 wherein said contrast agent is a water insoluble contrast agent.

5 8. The method according to Claim 7 wherein said water insoluble contrast agent is selected from the group consisting of tantalum, tantalum oxide, tungsten, and barium sulfate.

9. The method according to Claim 7 wherein said water insoluble contrast agent is characterized by having an average particle size of about 10
10 μm or less.

10. The method according to Claim 6 wherein said contrast agent is a water soluble contrast agent.

11. The method according to Claim 10 wherein said water soluble contrast agent is selected from the group consisting of metrizamide,
15 iopamidol, iothalamate sodium, iodomide sodium, and meglumine.

12. A method for sealing endoleaks in a patient arising from endovascular repair of abdominal aortic aneurysms which method comprises:
identifying an abdominal aortic aneurysm in a patient;
endovascularly repairing said aneurysm by catheter delivery of an
20 endovascular prosthesis to the site of said aneurysm thereby inhibiting blood flow into the aneurysm;
identifying one or more endoleaks in a patient; and
delivering through a microcatheter to the site or sites of endoleaks in said patient a sufficient amount of a fluid composition comprising a

biocompatible prepolymer, a water insoluble contrast agent and, when necessary to provide for a fluid composition, a biocompatible solvent wherein said delivery is conducted under conditions wherein the fluid composition forms a coherent adhesive mass *in situ* thereby sealing the endoleaks.

5 13. The method according to Claim 12 wherein said water insoluble contrast agent is selected from the group consisting of tantalum, tantalum oxide, tungsten, and barium sulfate.

10 14. The method according to Claim 12 wherein said water insoluble contrast agent is characterized by having an average particle size of about 10 μm or less.

15 15. The method according to Claim 12 wherein the biocompatible prepolymer is selected from the group consisting of cyanoacrylates, hydroxyethyl methacrylate and silicon prepolymers.

16 16. A kits of parts for use in sealing endoleaks arising from endovascular repair of an aneurysm which comprises:

- 20 (a) a fluid composition which forms a coherent mass in the presence of blood which mass adheres to the vascular surface and/or the surface of the endovascular prosthesis;
- (b) a catheter suitable for delivering the fluid composition to an endoleak site formed from endovascular repair of an aneurysm; and
- (c) a catheter suitable for delivering an endovascular prosthesis to the aneurysm.

25 17. The kit of parts according to Claim 16 which kit further comprises an endovascular prosthesis.

18. A kits of parts for use in sealing endoleaks arising from endovascular repair of an aneurysm which comprises:

(a) a fluid composition which forms a coherent mass in the presence of blood which mass adheres to the vascular surface and/or the surface of the endovascular prosthesis;

(b) a catheter suitable for delivering the fluid composition to an endoleak site formed from endovascular repair of an aneurysm; and

(c) an endovascular prosthesis.

19. The kit of parts according to Claim 18 which kit further comprises a catheter suitable for delivering an endovascular prosthesis to the aneurysm.